
PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



August 18, 2008

VIA ELECTRONIC FILING

Ms. Marlene Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: *Ex parte* communication from the California Public Utilities Commission,
WC Docket No. 07-38, *Development of Nationwide Broadband Data to Evaluate
Reasonable and Timely Deployment of Advanced Services to All Americans,
Improvement of Wireless Broadband Subscribership Data, and Development of
Data on Interconnected Voice over Internet Protocol (VoIP) Subscribership*

Dear Ms. Dortch:

On August 12 and 13, 2008, Michael Morris and Melissa Slawson of the staff of the California Public Utilities Commission (CPUC), in separate meetings, met with Commissioner Jonathan A. Adelstein and Legal Advisor Scott Bergmann, Legal Advisor for Chairman Martin, Amy Bender, Legal Advisor for Commissioner Copps, Scott Deutchman, Legal Advisor for Commissioner Tate, Greg Orlando, and Legal Advisor for Commissioner McDowell, Nick Alexander.

The purpose of these meetings was to discuss comments the CPUC filed in the above-referenced proceeding, and to answer any questions that Commission staff may have had regarding current mapping and data gathering procedures the CPUC is performing in carrying out its statutory duties under the California Digital Infrastructure and Video Competition Act (DIVCA) of 2006. The positions the CPUC stated during these meetings were consistent with our publicly-filed comments. The only additional information presented in these meetings included two maps the CPUC created in the course of our statutory duty as the State's Video Franchising Authority, as well as an example of the data analysis methodology used by the California Broadband Task Force. All information provided during these meetings is referenced in, and pertains directly to, arguments made in our opening comments in this docket.

M. Dortch, Secretary
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In accordance with § 1.1206 of the FCC's rules, a copy of this notice is being filed via the Commission's Electronic Filing System in the above-referenced docket. Should you have any questions, please feel free to contact me directly.

Sincerely,

/s/ HELEN M. MICKIEWICZ

Helen M. Mickiewicz
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Hmm: hem

Enclosures



Nationwide Broadband Data

Presentation of the Video
Franchising/Broadband
Deployment Group
California Public Utilities
Commission

Form 477 Issues Particularly Important to CPUC

- Under the Phase III decision of the Digital Infrastructure and Video Competition Act (DIVCA), the CPUC changed collection methods to use Form 477 data
 - ❑ DIVCA requires service providers to report subscription data in exactly the same way that the FCC requires providers to report on the number of subscribers in each Census Tract in each of the broadband tiers and reporting requirements imposed by the FCC
 - ❑ This information is vital to the CPUC's ongoing duty to determine unserved and underserved areas throughout the state
 - Multiple state programs



Sharing Form 477 Data with the States

- Form 477 data should be shared with the states
 - Facilitate state mapping and data analysis initiatives
- Require broadband providers to report this data concurrently to state agencies, or
- Distribute it to state agencies itself on an expedited basis.
 - Reduce delay



Data Collection: Granularity

■ Census Tracts

- ❑ Form 477 Data and Franchise holder data under DIVCA is currently collected by Census Tracts
- ❑ Rural census tracts too large to be useful in understanding where unserved territories are located


■ Street Addresses

- ❑ Most granular and most accurate information possible
 - Would provide the best overall picture of broadband availability throughout the country
- ❑ Administratively burdensome
 - FCC, state agencies, and broadband providers
 - 100s of millions of addresses to process



AREA OFFERED WIRELINE BROADBAND IN CALIFORNIA (State Video Franchisees or their Locally Franchised Affiliates)



AREA OFFERED BROADBAND
 by a State Video Franchisee or Locally Franchised Affiliate
 (Represents 12,419,916 households
 -99% of households in state)

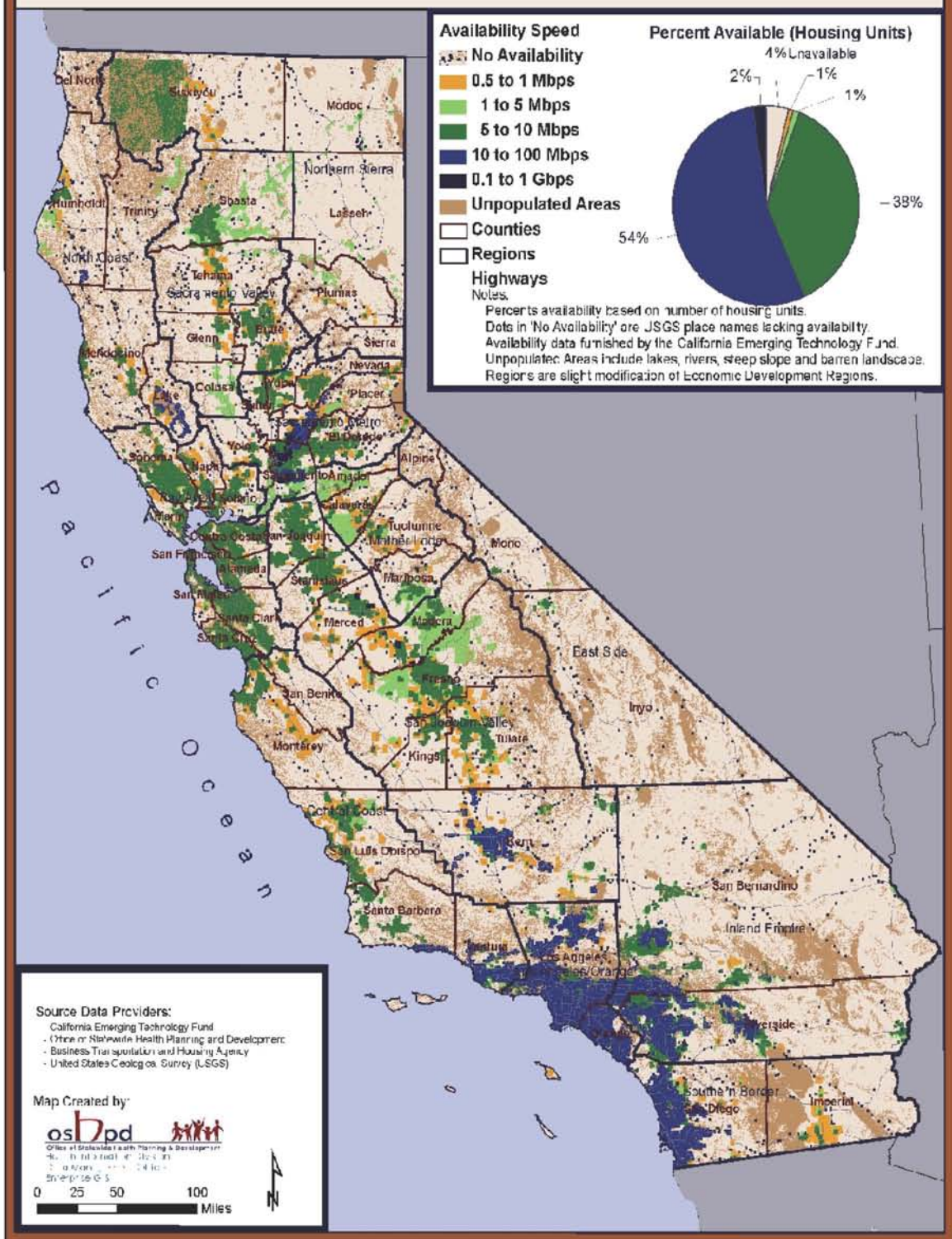
0 80 160 Miles
 0 150 300 Kilometers



Sources: DIVCA Annual Data, 2008
 Projection: Lambert Conformal Conic; Coordinate System: California State Plane, Zone 3; North American Datum 1983
 Prepared by the California Public Utilities Commission, Communications Division, Video Franchising and Broadband Deployment Group



California Wireline Broadband Availability



Data Collection: Granularity

- If the FCC chooses to undertake the task of collecting address-by-address data:
 - Information should be submitted in standard geocoding formats
 - The FCC should use a street address methodology similar to that used by the California Broadband Task Force
 - Broadband Providers could either provide the Task Force address information or map-based service area delineations



Data Collection: Granularity

- If the FCC chooses not to undertake the task of collecting address-by-address data:
 - The CPUC recommends using a census-based reporting area smaller than Census Tract, such as a Census Block
 - Allows for assessment of broadband data against U.S. Census Bureau factors (income level, education, age, percentage of English-speaking households, etc.)



Average Number of Households per Census Geography in California

CENSUS GEOGRAPHY	AVE NO. OF HOUSEHOLDS (IN CALIFORNIA)
Block	22
Block Group	520
Tract	1628



National Broadband Mapping Program

- Such a program will be helpful to the FCC and policy makers
 - ❑ Identify served and unserved areas across the nation
 - ❑ Inform decisions upon which to base broadband grants/ loans/ development programs
 - E.g.. Evaluate digital divide issues and focus policy accordingly
 - Facilitate broadband programs to encourage infrastructure buildout, community access, faster speeds, etc.
 - ❑ Facilitate comparison to individual states to other states and the nation as a whole and determine which programs are working

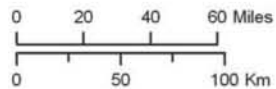
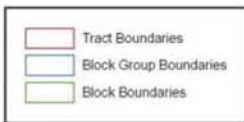


National Broadband Mapping Program

- A National Mapping Program would supplement, not replace, state and public/private mapping efforts
- Would provide the base data upon which states or public/private partnerships could add layers of data of particular state or local relevance
 - e.g., additional maps could focus on demand aggregation in unserved areas
 - Identify population clusters
 - Identify local business needs
 - Identify state/school/library needs
 - e.g., state can add facilities that could support additional broadband deployment
 - Identify radio towers
 - Identify forestry department towers



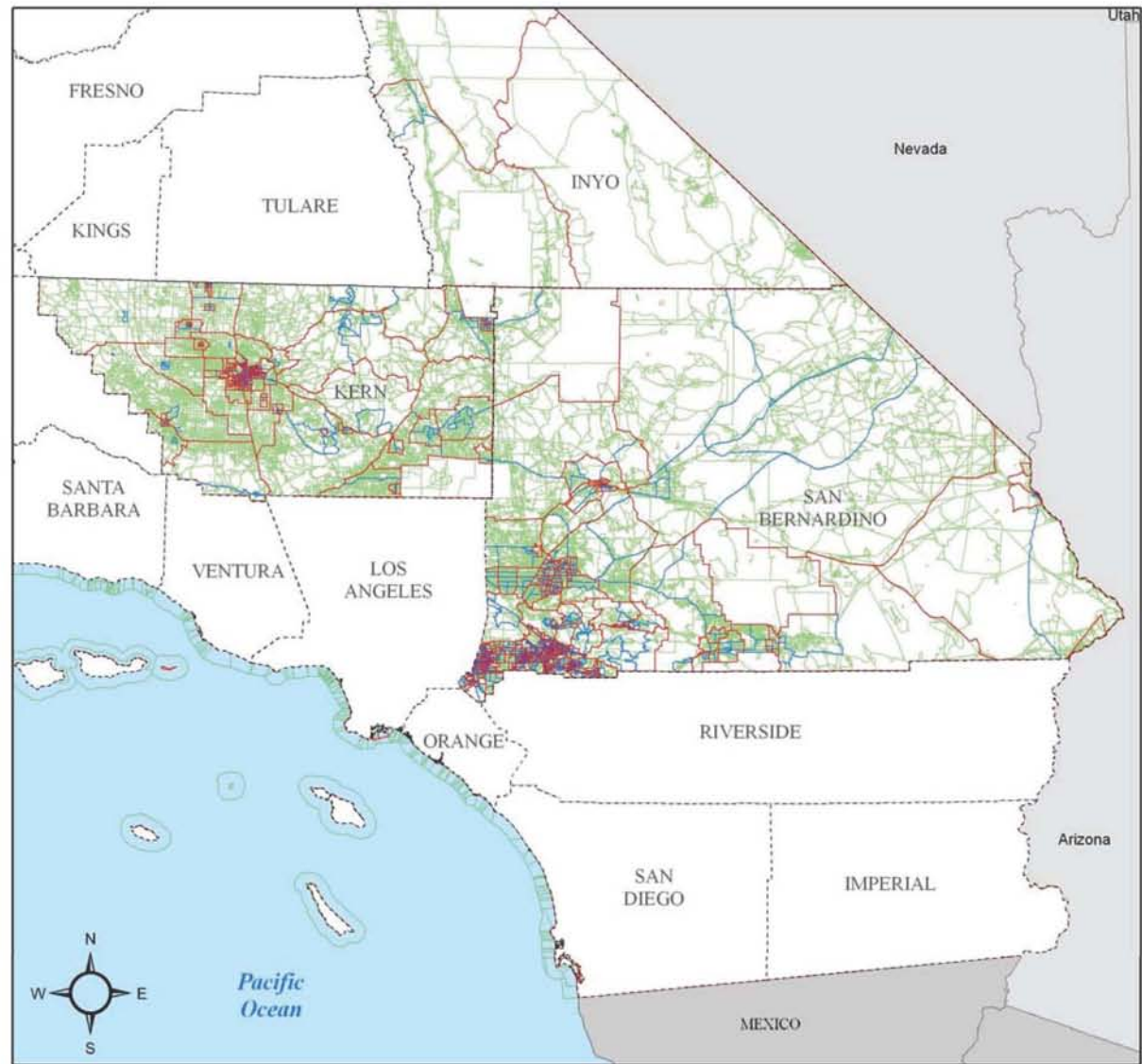
CENSUS GEOGRAPHY COMPARISON (Blocks, Block Groups, and Tracts)



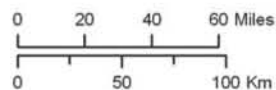
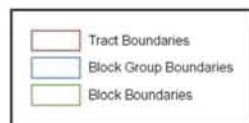
Source: US Census Bureau, 2000

Projection: Lambert Conformal Conic, Coordinate System: California State Plane, Zone 3, North American Datum 1983

Prepared by the California Public Utilities Commission, Communications Division, Video Franchising and Broadband Deployment Group



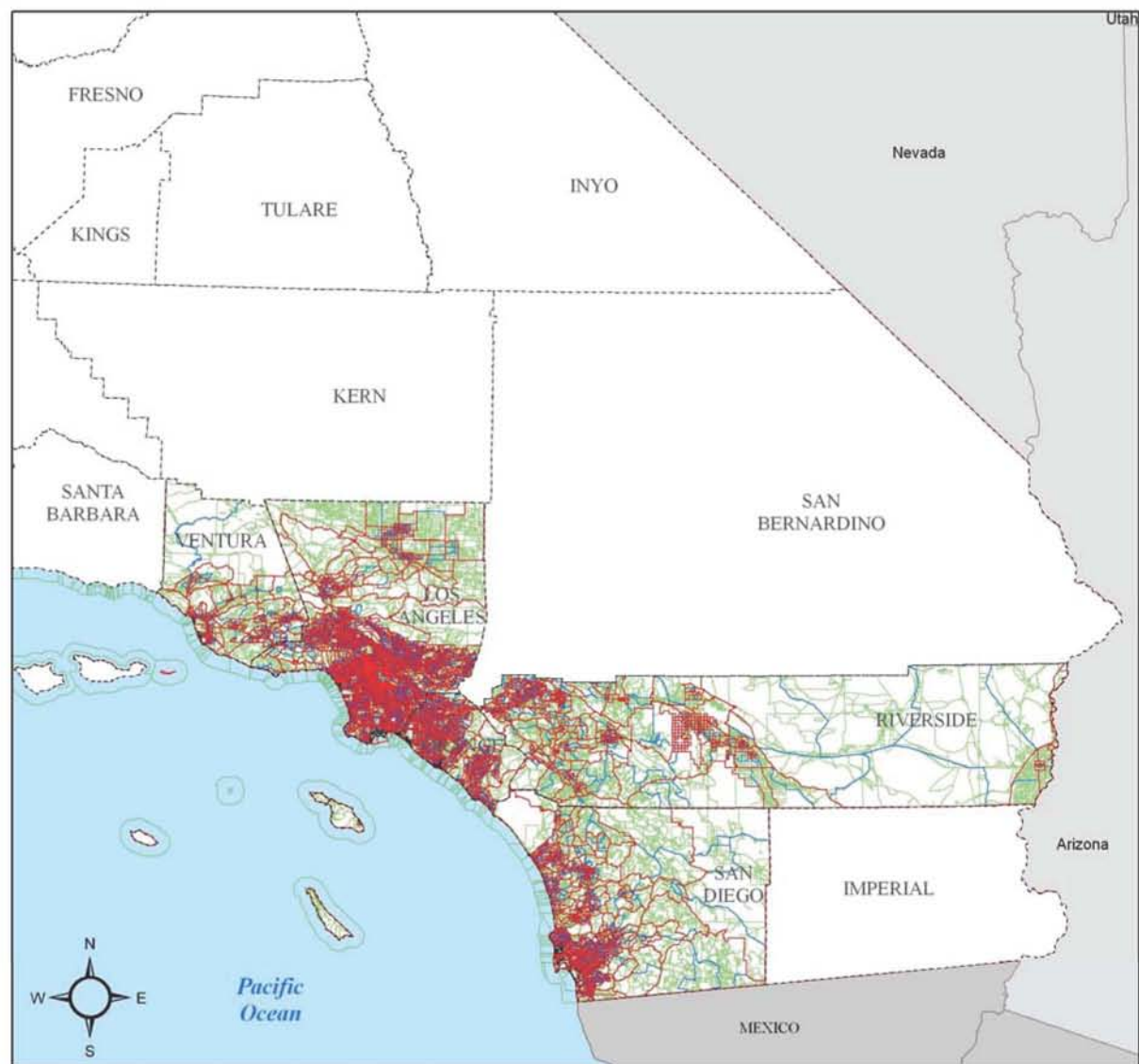
CENSUS GEOGRAPHY COMPARISON (Blocks, Block Groups, and Tracts)



Source: US Census Bureau, 2000

Projection: Lambert Conformal Conic, Coordinate System: California State Plane, Zone 3; North American Datum 1983

Prepared by the California Public Utilities Commission, Communications Division, Video Franchising and Broadband Deployment Group



California Broadband Task Force

Appendix: Broadband Mapping by Speed Methodology

Introduction

The CBTF confronted several significant challenges in developing wireline broadband availability speed maps for California. These included:

- Accurately portraying broadband availability and unavailability
- Preserving provider competitive advantage and confidentiality
- Coordinating provider data through a neutral third party
- Agreeing on a mapping protocol (including the most appropriate scale for data collection, analysis and display – three different issues).
- Agreeing on a speed tier protocol

The Build-Out Working Group to the CBTF and staff described an initial mapping protocol that was presented to the CBTF on May 24. Michael Byrne, GIS Architect for the Office of Statewide Health Planning and Development and staff to the CBTF refined this protocol to meet the needs of wireline broadband providers and the CBTF. The California Emerging Technology Fund adopted the resulting mapping protocol for its project with the third party.

The intent of this mapping protocol was to provide the CBTF, Governor and Legislature with the most comprehensive and accurate assemblage of broadband availability in the State. This effort was accomplished by integrating provider data on speed and availability from the address level.

Supplied Data Specification

Wireline broadband providers submitted to a third party location-based reference(s) (e.g., discrete addresses or map-based service area delineations) for available broadband services. Each was coded by the highest available speed tier offered. Each speed tier represented a combined upstream and downstream speed. The tiers submitted were:

- 500 Kbps to 1 Mbps
- 1 Mbps to 5 Mbps
- 5 Mbps to 10 Mbps
- 10 Mbps to 100 Mbps
- 100 Mbps to 1 Gbps
- 1 Gbps to 10 Gbps

Providers delivered the above data to the third party, Michael Baker Corp. (Baker) in the following format alternatives:

Provider Alternative 1 – Preferred Format for Addresses:

A list of all addresses, in a parsed-address field format, with available broadband within the provider's service area:

Provider Alternative 1 Š Address Record Format													
Parsed_address													
ID	House Number	Prefix Direction	Street Name	Street Type	Suffix Direction	City	County	Exchange * (Telco only)	ZIP Code	CBTF Speed	Latitude*	Longitude*	Census*
1	818	S	K	St	NW	Sacramento	Sacramento	Sacramento	95814	3	34.386543	-119.7653	60670100111001

Provider Alternative 2 – Secondary Format Preferences for Addresses:

A list of all addresses, in a concatenated-address field format, with available broadband within the provider's service area:

Provider Alternative 2 Š Address Record Format										
Concatenated_address										
ID	Address	City	County	Exchange * (Telco only)	ZIP Code	CBTF Speed	Latitude*	Longitude*	Census*	
1	818 SK St NW	Sacramento	Sacramento	Sacramento	95814	3	34.386543	-119.7653	60670100111001	

- Notes Associated with Provider Alternative 1 or 2:
 - All non-* fields (ID, Address (parsed or concatenated), City, ZIP_Code, & CBTF_Speed) are required.
 - Fields with an * (Latitude, Longitude, Census) are optional if available.
 - If submitting Latitude and Longitude, Decimal Degrees (as shown above) is preferred over Degrees Minutes Seconds (e.g. - 119 47 13.83)
 - Census will be used (if populated) to assist with the mapping. If providing Census please describe what census codes you are submitting. The preferred census geography is the 15 digit block code (State + County + Tract + Block with leading zero's).
 - The ID Field is a unique counting number (e.g. record number from 1 ... n)
 - For CBTF_Speed please submit speed tier (e.g. 1 – 5) or raw speed numbers and the vendor will translate for you.
 - A tab-delimited transferable digital table (e.g. tab separated values) with any associated notes and a contact person in a readme.txt file will be accepted.

Provider Alternative 3 – Map-based Service Area Delineations:

A GIS or CADD data file (an ESRI shapefile or personal geodatabase, or Autodesk AutoCAD DWG file, or Bentley Microstation DGN file) with available broadband within the provider's service area only if such areas are delineated by CBTF_Speed as city blocks or smaller areas. The intent of this

alternative is to permit providers that maintain such broadband availability data as map-based representations an opportunity to provide such information as map-based representations in lieu of a list of all addresses.

Provider Alternative 3			Map -based Service Area Delineations			Record Format
ID	City	County	Exchange* (Telco only)	ZIP Code	CBTF Speed	Census*
1	Sacramento	Sacramento	Sacramento	95814	3	60670100111001

- Notes Associated with Provider Alternative 3:
 - All areas must be represented as closed polygons with a single unique id.
 - Any variation of a record item, City, County, Exchange (if provided), Zip Code, CBTF_Speed or Census) must result in a separate formed and closed polygon.
 - All areas formed and contained within a closed polygon must have available broadband service within 50' from the inside edge of the surface to which the polygon's area is delineated.
 - All non-* fields (ID, City, County, ZIP_Code, & CBTF_Speed) are required within an associated database record accompanying the GIS or CADD data.
 - Fields with an * (Exchange, Census) are optional if available.
 - Decimal Degrees (as shown above) is preferred over Degrees Minutes Seconds (e.g. -119 47 13.83)
 - Albers Equal Area projection
 - Census will be used (if populated) to assist with the mapping. If providing Census please describe what census codes you are submitting. The preferred census geography is the 15 digit block code (State + County + Tract + Block with leading zero's).
 - The ID Field is a unique counting number (e.g. record number from 1 ... n)
 - For CBTF_Speed please submit speed tier (e.g. 1 – 5) or raw speed numbers and the vendor will translate for you.
 - If a database table is provided for attribute information associated with the GIS or CADD file, please specify its format and schema or deliver the accompanying database records as a tab-delimited transferable digital table (e.g. tab separated values) with any associated notes and a contact person in a readme.txt file will be accepted.

Technical Workflow

The technical workflow used to process the California broadband availability data included seven steps:

- Data Submission Agreements
- Register / describe data,